**Part 1 QUESTIONS (85% of overall score)**

**1. What does the Benedict’s test measure? (2 pts)**

a. starch

b. monosaccharides

c. reducing sugar

d. protein

**2. What does the Biuret test measure? (2 pts)**

a. starch

b. monosaccharides

c. reducing sugar

d. protein

**3. What colors could you see in a positive reaction for the Benedict’s test? (2 pts)**

a. green, yellow, red

b. blue, yellow, red

c. blue, green, purple

d. purple, pink

**4. What colors would you see in a positive reaction for the Biuret test? (2 pts)**

a. green, yellow, red

b. blue, yellow, red

c. blue, yellow, pink

d. purple, pink

**Questions 5 to 8 (2 pts each)**

Find the right labels for the drinks. The products are:

**DRINK A** contains sugar, whey protein

**DRINK B** contains sugar, whey protein, starch

**DRINK C** contains sugar

**DRINK D** contains sugar, starch

Reactions with Biuret, Benedict’s, and Iodine tests are given in the table below.

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Biuret** | **Benedict’s** | **Iodine** |
| **Sample #** | **Pos(+); Neg(-)** | **-/+** | **-/+** |
| 1 | **Pos (+)** | **Pos (+)** | **Pos (+)** |
| 2 | **Pos (+)** | **Neg (-)** | **Neg (-)** |
| 3 | **Neg (-)** | **Pos (+)** | **Pos (+)** |
| 4 | **Neg (-)** | **Neg (-)** | **Neg (-)** |

5. SAMPLE **1** = DRINK \_\_\_

6. SAMPLE **2** = DRINK \_\_\_

7. SAMPLE **3** = DRINK \_\_\_

8. SAMPLE **4** = DRINK \_\_\_

Based on the following nutrition label, please answer the following questions, (12 points)



**Calculate the Calories in one serving of this product**

9. Calories from **fat** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

10. Calories from **protein** \_\_\_\_\_\_\_\_\_\_\_\_\_\_.

11. Total Calories in **one serving** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

12. If the daily value for Calcium is 1000 mg per day, calculate the amount (in mg) of

**Calcium** contained in 2 servings of this product.

13. If % Daily Values are based on a 2,500 Calories diet instead of 2000, what

should the % Daily Values be for **Saturated Fat**?

14. For an adult on a 2000 calorie diet, what is the maximum amount (in ml) of this

product that he can consume per day based on Recommended Daily Limits listed on the label?

**15. Proteins are affected by… (2 pts)**

a. Temperature

b. pH

c. Structure

d. All of the above

**16. The … structure of a protein is made from the hydrogen bonds (2 pts)**

a. Primary

b. Secondary

c. Tertiary

d. Quaternary

**17. The process of modifying the molecular structure of a protein, or cooked protein, is**

**called \_\_\_\_\_\_\_\_\_\_\_\_. (2 pts)**

a. esterification

b. fermentation

c. denaturation

d. pickling

e. coagulation

**18. Saturated fats are \_\_\_\_\_\_\_\_\_\_\_** . **(2 pts)**

a. single bonds

b. double bonds

c. triple bonds

**19. Which of the following does not contain carbohydrates? (2 pts)**

a. wheat,

b. apple,

c. milk,

d. corn oil,

e. none of the above

**20. The only animal­based carbohydrates is \_\_\_\_\_. (2 pts)**

a. lactose

b. fructose

c. galactose

d. maltose

e. sucrose

**21. Which of the following is not a type of lipids? (2 pts)**

a. fat,

b. wax,

c. lecithin,

d. oil,

e. none of the above

**22. Folic acid is also known as what vitamin? (2 pts)**

a. Vitamin A, e. Vitamin K

b. Vitamin B12,

c. Vitamin C,

d. Vitamin B9,

**23. There are only 9 GMO commercially available crops. Which of the following is not one of these 9 GMO crops? (2 pts)**

a. Cotton for fiber

b. Field Corn for animal feed

c. Potatoes for human food

d. Wheat for human food

**Questions 24 – 27, Match the type of leavening agent to the baked good in which it is used (8 pts)**

1. Air a. Pie crust
2. Baking powder b. Muffins
3. Water c. Bagels
4. Yeast d. Angel food cake

**28. What is Cream of tartar (2 pts)**

a. Yeast

b. Maltose

c. NaHCO3

d. Acid

**29. The USDA Dietary Guidelines for Americans advise: (2 pts)**

a. Limiting carbohydrates to 10 percent of daily calories

b. Limiting total fat intake to 20 to 35 percent of calories

c. Limiting protein to 10 percent of daily calories

d. Limiting intake of fats and oils to 10 percent of daily calories

**30. The U.S. Food and Drug Administration (FDA) considers eight major food allergens. Please list the major allergens in your answer sheet. (8 points, 1st tie breaker)**

**31. What is “Anaphylaxis” (2 pts)**

a. Process of food absorption

b. Food preservation technique

c. Sever e allergic reaction

d. Food poisoning

**32. What are 3 commercially available GMO crops grown for human food? (3 points, 2nd tie breaker)**

**33. Food spoilage is due to (2 pts)**

a) micro-organisms and enzymes

b) micro-organisms and excess production

c) enzymes and excess production

d) all the above

**34. Gluten is present in (2 pts)**

a. Nuts, beans and legumes

b. Wheat, barley and rye

c. Eggs, dairy products and fish

d. corn, rice and potato

**35. Find four commonly eaten whole grains from this list (4 pts)**

a. Oatmeal e. Quinoa i. white bread

b. White rice f. Pretzels j. Grits

c. Popcorn g. corn flakes

d. White flour h. Cracked wheat

**36 – 39 Match the following foods with preservatives (4 pts)**

**Food item** **Preservatives**

36. Apple Jam a. Potassium Metabisulphite

37. Pickle b. Sugar

38. Milk c. Citric acid

39. Squash d. Removal of moisture

e. Pasteurization

f. Oil, salt

g. Sodium Benzoate

**40. What is the density of a square piece of cake weighing 100 grams and measuring 5 cm in length and width and 5 cm in thickness? (2 pts)**